
The Use of Environmental Management Systems in Permitting Decisions

2006 MSWG Conference

Environmental Empowerment: *The Changing Game*

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Background

- ❑ SC Environmental Excellence Program
 - ❑ Voluntary Environmental Leadership Program created in 1997
 - ❑ 30 members with over 50 facilities in program
 - ❑ EMS component of membership criteria
 - ❑ SC Environmental Innovations Pilot Program
 - ❑ Authorizing legislation in 2002
 - ❑ EMS requirement for participation in pilot
 - ❑ EMSs in Consent Decree/Settlement Agreement
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Project Background

- ❑ EPA State Innovations Grant awarded May 2005
 - ❑ EPA Office of Solid Waste & Office of Policy, Economics and Innovations
 - ❑ Incorporate EMSs into the regulatory framework
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Project Goals

- ❑ Explore how an effective EMS can impact specific permit requirements
 - ❑ Determine how EMS can help with consistency in developing, issuing, monitoring, and enforcing a permit
 - ❑ Evaluate benefits of incorporating EMS as incentive for permitting options
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Project Activities

- ❑ Form Project Advisory Team
 - ❑ Retain EMS consultant
 - ❑ Solicit participation of up to 4 facilities
 - ❑ Conduct internal EMS training
 - ❑ Analyze facility permits and EMSs
 - ❑ Evaluate potential permit revisions based on findings
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Participating Facilities

Dayco Products

Located in Walterboro, SC (population rural)

Manufacturer of power transmission belts with est. 200 full time employee's

Type of EMS: *ISO 14001*

Environmental Permits

- Conditional Major Air Permit

- Wastewater NPDES Permit

- NPDES Stormwater General Permit



Participating Facilities

Charleston Air Force Base

Located in Charleston, SC (est. population 80,000)

Federal Facility with est. 6,000 full time employees;

Military Mission: support, train and deliver work-class airlift for our Nation's premier Air Force Base (C-17 aircraft)

Type of EMS: *ISO 14001 Like*

Environmental Permits

RCRA Permit (Storage Facility)

Title V Air Permit

NPDES Stormwater General Permit

Non-Domestic Wastewater Discharge Permit



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Participating Facilities Cont.

Milliken-Dewey Plant

Located in Inman, SC (est. population 2,000)

Chemical Manufacturing Facility with est. 300 full time employee's

Type of EMS: *ISO 14001 and Responsible Care Initiative*

Environmental Permits

- RCRA Permit (Storage Facility)

- Title V Air Permit

- Wastewater NPDES Permit

- NPDES Stormwater General Permit

Participating Facilities Cont.

Holcim

Located in Holly Hill, SC (population rural)

Portland Cement Company with est. 300 full time employee's

Type of EMS: *ISO 14001*

Environmental Permits

- RCRA Part B (Treatment & Disposal Permit)

- Title V Air Permit

- Wastewater NPDES Permit

- NPDES Stormwater General Permit

EMS Staff Trainings

- ❑ EMS 101(201 attendee's)
 - ❑ 4 hour training
 - ❑ Dayco Products participated as the case study
 - ❑ EMS in Permitting (30 attendee's)
 - ❑ 12 hour additional training
 - ❑ Charleston AFB, Holcim and Dayco Products participated as case studies
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Pre and Post-Test Results

- Pre and Post-Test Evaluations used to measure increased understanding/awareness of EMS
 - 14.7 % overall increase in awareness in EMS 101
 - 11.3 % overall increase in awareness in EMS and Permitting
 - Follow- Up Surveys to be sent out in January 2007
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Site Visits

- ❑ Review of Facilities' Permits
 - ❑ Review of Facilities' EMS
 - ❑ (2) ISO 14001
 - ❑ ISO 14001/RC
 - ❑ ISO Like
 - ❑ Comparison charts developed as a tool
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Example of Comparison Charts

Draft Chart *Comparing EMS Standards to Environmental Permits*

EMS Standards	Hazardous Waste Permits Template/General Requirements-Holcim
General Information	SC-Code Section 44-56 and Regulation 61-79
1.0 Scope	Module I Standard Conditions SCR R.61-79 Permit # SCD 003 368 891
2.0 Normative references	Module I General Permit Conditions and Module II General Facility Conditions
3.0 Terms and definitions	Module I.D R.61-79 parts 124,260, 261, 264,266,268,270 (JD 10)
4.0 Environmental Management Systems Requirements	Module I - SC HWM R.61-79 parts 124,260, 261, 264,266,268,270 (JD 10)
4.1 General requirements	Module 1 - Standard Conditions
4.2 Environmental Policy	Facility Environmental Policy
4.3 Planning	No Section Heading for this EMS Element
4.3.1 Environmental Aspects	Module II.B (p14)and Module VIII - I.D.11 (p6) (Modules III through VII) (Appendix B)
4.3.2 Legal and Other Requirements	Hazardous Waste Permit (SCD 003 368 891) (p1)
4.3.3 Objectives, Targets and Programme(s)	Waste Minimization Certification Objectives (p60)
4.4 Implementation and operation	Appendix B:RCRA Facility Investigation (RFI) Appendix C: Corrective Measures -Work Plan Outline (p59)
4.4.1 Resources, Roles, Responsibility and Authority	Module II Appendix C - Add Compliance, I.E. Duties (p7)
4.4.2.Competence, Training and Awareness	Module II G - R.61-79.264.16 (p15)
4.4.3. Communication	Appendix E - Land Use Control Management Plan, Appendix C-7A(p80)
4.4.4 Documentation	I.H, I.I. Documents to be Maintained (p12,13)
4.4.5 Control of Documents	I.H, I.I. Documents to be Maintained (p12,13)
4.4.6 Operational Control	Module II, III, IV, p(4) Appendix B RCRA Workplan (p70) IV,D (p24)
4.4.7 Emergency Preparedness and Response	Module II K.2, II K 3, II K 4 , II K.6 (p16)

Preliminary Findings

- ❑ EMS assisted in tightening compliance system
 - ❑ EMS increased performance
 - ❑ EMS increased the roles and responsibilities
 - ❑ EMS/Permits have very similar requirements
 - ❑ Permits address corrective actions in more detail
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Benefits of DHEC Understanding a Facility's EMS

- ❑ Establishes the understanding of the company's environmental commitment
 - ❑ Stated requirements of the EMS
 - ❑ Time savings
 - ❑ Incentives
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Next Steps

Project Performance Measures

- ❑ Environmental performance in terms of waste reductions or waste avoidance
- ❑ Environmental condition indicators
- ❑ Environmental compliance indicators
- ❑ Pollution prevention and waste minimization opportunities
- ❑ Quality and quantity of environmental information produced
- ❑ Administrative cost savings and resource efficiencies

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